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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,239	04/12/2004	Te-Sun Wu	JCLA12729	4072
23900	7590	08/30/2007	EXAMINER	
J C PATENTS, INC.			JAMAL, ALEXANDER	
4 VENTURE, SUITE 250				
IRVINE, CA 92618				
			ART UNIT	PAPER NUMBER
			2614	
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			08/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,239	Applicant(s) TE_SUN WU	
	Examiner Alexander Jamal	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. **Claims 1-7** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per **claims 1-7**, it is not clear exactly where the control is ‘transmitting’ the “audio signal received from the directional speaker” to. It is not clear how the directional speaker receives a signal ‘from’ the directional speaker because the directional speaker requires an audio signal be transferred “to” it. For the purpose of examination, examiner assumes the claim is supposed to read “transmitting an electrical audio signal received by the directional speaker”.

Appropriate correction/clarification required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. **Claims 1-6,8,9,12-17** rejected under 35 U.S.C. 102(a) as being anticipated by Lygas (6532292).

As per **claim 1**, Lygas discloses a system that may be used with a phone system (Col 1 lines 10-25). The system comprises directional speaker elements 120,130 in Fig. 2 and a receiver (microphone) which audio signals are sent, but the microphone does not receive the directional speaker output (reduce echo) (Col1 lines 45-50). The system is used in a phone, where the means to transfer signals received by the microphone to a communications network are provided to perform the known telephone function of communication.

As per **claims 8,14** they are rejected as per the claim 1 rejection. The ultrasonic modulating system functions to polarize a remote audio signal such that it propagates directionally through air.

As per **claims 2,9,15**, the directional speaker elements create a signal field of predetermined shape (which includes a predetermined direction and range). The field is created using an ultrasonic carrier wave. (Col 2 lines 1-20).

As per **claims 3,16,17**, the ultrasonic modulated signal is demodulated through air back into an audible signal (Col 3 lines 30-60) within the predetermined field.

As per **claim 4**, the receiver microphone is not within the range (it is only in the ear canal). There is a stated advantage that this setup will reduce echo (Col 1 lines 55-60):

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As per **claim 5**, the device creates a field inside the canal of a listener, which would be a wedge with a predetermined direction and a characteristic direction (based on the shape) creating an angle of less than about 30 degrees (Col 3 lines 20-30).

As per **claims 6,12,13**, they are rejected as per the claim 1 rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 7,10,11** rejected under 35 U.S.C. 103(a) as being unpatentable over Lygas (6532292) as applied to claims 1-6,8,9, above, and further in view of Li (US20040124739).

As per **claims 7,10**, Lygas discloses the ultrasonic directional speaker used for echo reduction, but does not specify the specifics of the audio signal modulating portion or any pre-compensation for the audio signal.

Li teaches an ultrasonic modulator for a directional speaker. The modulator comprises precompensator 200 (fig. 3) and ultrasonic modulator 204, AM unit 202, and power amplifier 206. It would have been obvious to one skilled in the art at the time of

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this application to implement a known ultrasonic modulating system to provide the details (such as modulating type) left out by Lygas.

As per **claim 11**, it is rejected as per the claim 1 rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498. The examiner can normally be reached on M-F 9AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499. The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

Examiner Alexander Jamal
August 21, 2007

A handwritten signature in black ink, appearing to read 'Alexander Jamal', is written over a horizontal line.